

Application Serial No. 10/813,538
Reply to office action of June 14, 2007

PATENT
Docket: CU-3660

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

Claims 1-21 are pending before this amendment in which claims 4-9, 17 and 18 have been withdrawn. By the present amendment, claims 1, 10 and 19 are amended. No new matter has been added.

Regarding the first obviousness rejection

In the Office Action, claims 1-3 and 19-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. Appl. Publ. No. 2002/0093285 (Sugimoto).

For the reasons presented below, the Applicant respectfully traverses this obviousness rejection of claims 1-3 and 19-21 under Sugimoto, and submits that these claims, as they now stand, are in allowable form.

First, the Examiner's attention is respectfully directed towards the following emphasized limitation now found in both independent claims 1 and 19, as amended, which require that --the substrate or the top surface of the thin film layered body on which the protective coat is coated is selected from the group consisting of acrylic UV curable resins, polyethylene naphthalate and polyethersulfone--

In contrast to the presently claimed independent claims 1 and 19, as amended, the Office Action (page 2) uses Sugimoto to teach EL devices comprising a silicon oxynitride film formed on a resin substrate. The Examiner acknowledges that Sugimoto

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fails explicitly to teach the ranges recited in instant claim 1, but the Examiner alleges that the prior art teaches the general conditions of a claimed invention. The Examiner continues by asserting that it is not inventive to discover optimum or workable ranges through routine experimentation.

However, nowhere in the Office Action is Sugimoto used to teach or suggest the above emphasized limitations now found in independent claims 1 and 19. Further, the Applicant respectfully submits that Sugimoto is silent with regards to the above-emphasized limitations now found in independent claims 1 and 19.

Second, as mentioned in the specification (paragraphs [0009] - [0014]), Sugimoto only discusses the barrier properties of the silicon oxynitride film only in terms of the O/N ratio which is an uncertain factor regarding the quality thereof. Further, in Sugimoto, silicon oxynitride film is formed using oxygen as an introduced gas for a SiN target. This oxidation of SiN taught by Sugimoto unfortunately results in unacceptable variations in quality and which consequently results in obtaining desired compositions difficult or impossible.

Further, as mentioned in the specification (paragraph [0038] - [0040]), the composition ratio of silicon oxynitride film, Si/O/N is quite important for the barrier property thereof and is firstly found by the Applicant of this application.

Since Sugimoto does not disclose or teach the composition ratio of Si to O and N, then the Applicant respectfully asserts that subject matter of Claims 1 - 3 cannot be found by using routine experimentation by a person skilled in the art.

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Third, with regards to the Examiner statement regarding these comparative examples, they appear not to be a comparison with Sugimoto and accordingly are not persuasive. The Applicant respectfully asserts that the specification disclose that comparative examples 1 and 2 were carried out under conditions "close to" those of Sugimoto. Thus, the proffered evidence is not a comparison with Sugimoto. However, the reason why the term "close to" was used is that the production conditions of Sugimoto are not fully disclosed in detail. Further with respect to the N/O ratio which is disclosed in Sugimoto, this ratio in the comparative examples 1 and 2 agree perfectly to those of Sugimoto. Thus, the Applicant respectfully submits that the proffered evidence can be a comparison with Sugimoto.

As per MPEP §2143.03, to make obvious an invention, the prior art references must teach or suggests all of the claimed limitations of that invention.

In view of all of the above arguments and in particular Sugimoto is silent with regards to above-emphasized limitations now found in independent claims 1 and 19, then Sugimoto cannot support an obviousness rejection to independent claims 1 and 19, as amended.

The Applicant therefore respectfully submits that independent claims 1 and 19, as amended, are in allowable form, and respectfully requests that the Examiner withdraw this obviousness rejection to independent claims 1 and 19.

Claims 2-3 and 20-21 depend upon either independent claims 1 and 19 and, as such, incorporate by reference all the claim limitations contained therein, including the

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above emphasized limitation which has already been shown to be absent from Sugimoto. Accordingly, dependent claims 2-3 and 20-21 are also believed to be in allowable form as being dependent upon an allowable base claim. The Examiner is respectfully requested to withdraw this obviousness rejection to dependent claims 2-3 and 20-21.

Regarding the second obviousness rejection

In the office action claims 1-3, 10-16, and 19-21 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Pat. Appl. Publ. No. 2002/0043929 (Tazawa)

For the reasons presented below, the Applicant respectfully traverses this obviousness rejection of claims 1-3, 10-16, and 19-21 under Tazawa, and submits that these claims, as they now stand, are in allowable form.

First, the Examiner's attention is respectfully directed towards the following emphasized limitation now found in all of the independent claims 1, 10 and 19, as amended, which require that --the substrate or the top surface of the thin film layered body on which the protective coat is coated is selected from the group consisting of acrylic UV curable resins, polyethylene naphthalate and polyethersulfone--

The Applicant respectfully notes that the subject matter of Claims 1, 10 and 19 is further defined by a limitation that "the substrate or the top surface of the thin film layered body on which the protective coat is coated is selected from the group consisting of acrylic UV curable resins, polyethylene naphthalate and polyethersulfone."

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In contrast to the presently claimed independent claims 1, 10 and 19, as amended, the Office Action uses Tazawa to teach EL devices comprising first and second layers formed on a resin substrate (abstract) in which the layers may be formed of such material as silicon oxide, silicon nitride and silicon oxynitride (see Tazawa paragraphs [0057]-[0059]). Moreover the Office Action uses Tazawa to teach that materials of one of the layers, e. g., SiON, is a functional equivalent of components of other layers, e. g., alumina (id.). Therefore, the Office Action alleges that it would have been obvious to employ the presently claimed materials from the structure taught by Tazawa, since Tazawa suggests the use of such materials.

However, nowhere in the Office Action is Tazawa used to teach or suggest the above emphasized limitations now found in independent claims 1, 10 and 19. Further, the Applicant can find nothing within Tazawa that teaches or suggests the above emphasized limitations now required in independent claims 1, 10 and 19.

Second, the Applicant respectfully submits that since Tazawa does not teach, disclose or suggest the composition ratio of Si to O and N, then the subject matter of Claims 1 - 3, and 19-21 cannot be found through routine experimentation by a person skilled in the art.

Third with regards Claims 10-16, the Applicant respectfully notes that indeed, in Tazawa, two or more layers are formed on the plastic substrate. The most relative disclosed layered structure in Tazawa comprises a gas barrier layer 3(SiO_x, Al₂O₃, SiON), a top coat layer (TiO₂), heat radiation layer 4 (Ag, Au, Al, SiC, BeO, AlN,

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Al₂O₃), insulating layer 5 (SiO_x, Al₃N₄, Al₂O₃) formed on the plastic substrate, in this order (see Tazawa paragraphs [0057]-[0059], as well as paragraph [0061] and [0067]). However, Tazawa does not mention the idea that the two protective layers can be formed on the top surface of a substrate, or on the top surface of a thin film layered body formed on the substrate so that a first layer is thin and a second layer is thick.

The Examiner said that "Tazawa teaches that materials of one layer, e.g., SiON, is a functional equivalent of components of other layers, e.g. alumina." However, the Applicant respectfully submits that in Tazawa, such a description or teaching does not exist. In fact, the word "SiON" only appears once in Tazawa. Therefore, the Applicant submits that Examiner's insistence regarding this point is not convincing.

As shown in amended independent claim 10, in this invention, the first layer is an oxide film and the second layer is a nitride oxide film or a nitride film, and wherein the first layer has a thickness of 200 Å - 1500 Å, and the second layer has a thickness of 1500 Å - 3000 Å.

Although in Tazawa, the thickness of the respective layers are not particularly limited, but in the example in Tazawa, there is a description that the thickness of the gas barrier layer 3 (corresponding to the first layer of this invention) is 5µm, namely, 50000Å. As compared with the thickness of the first layer of this invention, the thickness of the gas barrier layer 3 of Tazawa is significantly largest. Thus, the layered construction of Tazawa is quite different from the two layered protective film of this

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invention. Thus, the Applicant respectfully submits that the subject matter of claims 10-16 of this application is not made obvious by Tazawa.

In view of all of the above arguments and in particular Tazawa is silent with regards to above-emphasized limitations now found in independent claims 1, 10 and 19, then the Applicant respectfully believes that independent claims 1, 10 and 19, as amended, are in condition for allowance. Therefore, the Examiner is respectfully requested to withdraw this obviousness rejection based on Tazawa of independent claims 1, 10 and 19, as amended.

Claims 2-3, 11-16 and 20-21 depend upon either independent claims 1, 10 or 19 and, as such, incorporate by reference all the claim limitations contained therein, including the above emphasized limitation which has already been shown to be absent from Tazawa. Accordingly, dependent claims 2-3, 11-16 and 20-21 are also believed to be in allowable form as being dependent upon an allowable base claim. The Examiner is respectfully requested to withdraw this obviousness rejection to dependent claims 2-3, 11-16 and 20-21.

Regarding the provisional nonstatutory obviousness-type rejection

In the Office Action, claims 1-3, 10-16 and 19-21 stand provisionally rejected on the grounds of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-5 of copending Application No. 10/755,931.

The Applicant respectfully refrains from responding to this provisional obviousness rejection until an indication that allowable subject matter has been

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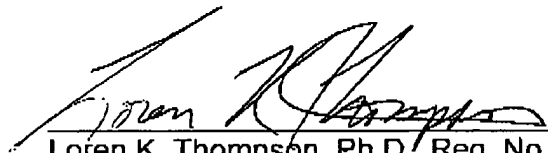
acknowledged by the Examiner.

In summary, the Applicant respectfully submits that claims 1-3, 10-16 and 19-21 now pending in this application are in condition for allowance. The Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections and earnestly solicits an indication of allowable subject matter. This amendment is considered to be responsive to all points raised in the office action.

Should the Examiner have any remaining questions or concerns, the Examiner is encouraged to contact the undersigned attorney by telephone to expeditiously resolve such concerns.

Respectfully submitted,

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